



# WESTON REGION 5 START MERCURY EMERGENCY RESPONSE SITE HEALTH AND SAFETY PLAN

*This Health & Safety Plan is strictly for Emergency Response (non-CBRN ERs), if site activities turn into a longer Site Investigation/ Assessment or Removal, WESTON's standard Health & Safety Plan needs to be generated and approved. This Health & Safety Plan is valid for 72 hours unless site conditions change. Contact the START Safety Officer to update or revise the plan.*

## 1. SITE INFORMATION

Prepared by: Tonya Balla	TDD: TBD	WO: TBD	Date Prepared: December 30, 2010
ER Initial Call (Date/ Time): December 30, 2010 1130 est	ER Date: 12/30/10	OSC R1 (Name/ Number) Jeff Lippert (734)-740-9013 734-308-1695 - cell	OSC R2 (Name/ Number):
Site Name and Contact: TBD		START R1 (Name/ Number): Matt Beer 248 939 7824	START R2 (Name/ Number):
Non-Response Canterbury Road, Ann Arbor, Michigan		START PM (Name/ Number): Dan Capone 313 218 2659	START FSO (Name/ Number): Matt Beer
Site History: Residential home -	Current Site Information: Approximately ½ cup of mercury spilled from an old grandfather clock.		
Scope of Work: (1) START and U.S. EPA will assess the site for the presence and extent of elemental mercury and mercury vapor contamination. (2) Oversee and document cleanup activities, if necessary. (3) Conduct confirmation air sampling, if necessary.			

## 2. REVIEW AND APPROVAL

	Name	Signature	Date
Reviewed and Approved by: SO/DSM/CHS	Tonya Balla		12/30/10
Reviewed by: FSO/ Site Manager	Matt Beer		12/30/10
Post Response Review by:			
Post Response Approval by:			

### 3. RESPONSE TASKS/ DURATION

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Tasks	Duration (Hours/Days)	Tasks	Duration (Hours/Days)
<input type="checkbox"/> Perimeter Recon		<input type="checkbox"/> Site Entry	
<input checked="" type="checkbox"/> Documentation	8 hours	<input checked="" type="checkbox"/> Air Monitoring	8 hours
<input type="checkbox"/> Multi-Media Sampling		<input type="checkbox"/> Decontamination	
<input type="checkbox"/> Hazcatting		<input type="checkbox"/> Data Management	

### 4. PHYSICAL HAZARDS TO PERSONNEL

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- ☒ *Buddy System* – The buddy or line of sight system is mandatory for all site personnel.
- ☒ *Heat Stress* – The FSO shall generally be guided by the Weston OP in determining work/rest periods. Fluids shall be available at all times and encouraged during rest periods.
- ☒ *Cold Stress* – The FSO shall generally be guided by the Weston OP in determining work/rest periods. Workers shall be provided with adequate warm clothing, rest opportunities and exposure protection. Warm and/or sweet fluids shall also be provided during rest periods.
- ☐ *Precipitation* – Personnel should be aware of the increased risk of slips and falls on wet surfaces as well as exposure effects caused by wet clothing. Personnel should dress appropriately.
- ☐ *Lighting* – Fixed or portable lighting shall be maintained for dark areas or work after sunset to ensure that sufficient illumination is provided.
- ☐ *Work Near Water* – All personnel working in boats, on docks or generally within 10 feet of water deeper than 3 feet shall wear approved personal flotation devices (PFDs) or work vests and wading boots as appropriate.
- ☐ *High Noise Levels* – Hearing protection shall be used in high noise areas (exceeding 85 dBA – generally where noise levels require personnel to raise their voices to be heard) as designated by the FSO.
- ☐ *Electrical Hazards* – Electrical hazards should be identified on the site work zone map and marked out as appropriate. All electrical equipment should be used with a ground fault circuit interrupter (GFCI).
- ☒ *Trip Hazards* – Open manholes, pits, trenches or similar hazards should be noted on the site map and should be marked off on site as appropriate.
- ☐ *Carbon Monoxide* – Equipment operators shall ensure that personnel do not linger or work near exhaust pipes.
- ☐ *UV Light Exposure* – Personnel should dress so as to cover as much exposed skin as possible. Personnel should use a sunscreen with a protection factor (PF) of 15 or greater and should wear tinted safety glasses.
- ☐ *Helicopter/Airplane Operations* – Pilots shall provide safety briefings for all passengers.

- ☒ *Motor Vehicles* – Drivers shall maintain a safe speed at all times and shall not be allowed to operate vehicles in a reckless manner. Seat belts will be worn. In backing situations where the rear of the vehicle cannot be clearly seen, one person shall act as a ground guide to assist the driver. In situations where ground clearance and soil conditions are not known, one person shall dismount and act as a guide. (*Also See Next Page*)
- ☐ *Terrain (Slips, Trips and Falls)* – All personnel will exercise due caution when walking through areas of uneven terrain and undergrowth to ensure proper footing.
- ☐ *Ionizing Radiation* – Any encounter with ionizing radiation requires Health Physics support. All START responders must wear personal dosimetry which should consist of a TLD and/or Self-Reading Dosimeter (SRD).
- ☐ *Non-Ionizing Radiation* – To the extent possible personnel should maintain a minimum distance of 30 feet from devices emitting radio or microwaves.
- ☐ *Underground/Overhead Utilities* – All underground utilities must be marked out prior to conducting intrusive activities. At least 15 feet of distance must be maintained with overhead utilities.
- ☐ *Confined Spaces* – Confined spaces will not be normally entered by response personnel. If a confined space is to be entered, a specific confined space entry work permit will be developed for that operation.
- ☐ *Drum Handling* – Drums must be handled in accordance with 29 CFR 1910.120. Containers must be labeled and constructed in accordance with EPA (40 CFR 264-265, and 300), and DOT (49 CFR 171-178) regulations. Temporary holding/staging areas for drums and other containers shall be constructed to contain spillage, runoff or accidental release of materials. Manual lifting and handling of drums shall be kept to a minimum. To the extent possible, mechanical devices, drum slings or other mechanical assist devices designed for that purpose should be used.

**SEE WESTON FIELD OPERATING PROCEDURES (OPs) FOR ADDITIONAL GUIDANCE**

<b>Vehicle Use Assessment and Selection</b>
<p><i>Driving is one of the most hazardous and frequent activities for WESTON Employees. The most appropriate type vehicle(s) authorized for use on this project is/are:</i></p> <ol style="list-style-type: none"> <li>1. <i>Personal vehicle</i></li> <li>2.</li> <li>3.</li> <li>4.</li> </ol>
<p><i>The following Project Team Member's qualifications and experience in driving these types of vehicles was evaluated and found to be acceptable (indicate vehicle type(s) number next to employee name). Team Member's driving the START box truck need to have a road test and DOT physical clearance every 2 years.</i></p> <ol style="list-style-type: none"> <li>1. <i>Matt Beer</i></li> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> <li>6.</li> <li>7.</li> <li>8.</li> <li>9.</li> <li>10.</li> </ol>
<p><i>The project site was evaluated and a Traffic Control Plan <input type="checkbox"/> is required <input checked="" type="checkbox"/> is not required.</i></p> <p><i>If required, the Traffic Control Plan can be found in Attachment A.</i></p>

## 5. BIOLOGICAL HAZARDS TO PERSONNEL

- ☐ *Insect Stings* – Hornet, wasp or bee stings, mosquito. Personnel should avoid the nesting areas of these insects. Personnel who are allergic to these insects should carry bee sting kits. Personnel may find repellants containing DEET effective in keeping these insects away.
- ☐ *Poisonous Spiders* – Black widow or brown recluse. Wear gloves when working in areas where these spiders may be present. If bitten, seek medical attention immediately.
- ☐ *Ticks* – Personnel should wear Tyvek when working in wooded areas as a precaution. Barring this, personnel should wear light colored clothing and tuck pants into socks. Personnel should also wear a repellant containing DEET. Personnel should use the buddy system and perform a tick check after exiting wooded areas. Suspected bites should be reported immediately.
- ☒ *Animal Bites* – Personnel should use extreme caution when in contact with strange animals. If bitten, seek medical attention immediately.

- ☐ *Snake Bites* – Personnel should use extreme caution when working in areas known to be inhabited by snakes. Snake leggings or chaps should be worn as a precaution. If bitten, seek medical attention immediately.
- ☐ *Poisonous Plants* – Personnel should use caution when working in wooded areas. Tyvek suits may be worn as a precaution. All personnel should wear Ivy Block.

## 6. TRAINING REQUIREMENTS

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- X 40-Hour HAZWOPER Training.
- X 8-Hour Annual Refresher Training w/ Blood borne Pathogen Training.
- X CPR and First Aid Training.
- 1 Site Health and Safety Supervisor Training (minimum one person on-site).
- ☐ 24-Hour Course for limited, specific tasks with 8-hour supervised OJT.
- ☐ 24-Hour Course for Level "D" site with 8-hour supervised OJT.
- ☐ 10-Hour Construction Safety Training
- ☐ Confined Space Training
- ☐ Competent Person Fall Prevention and Protection Training
- ☐ Competent Person Trenching and Excavation Training
- ☐ Dangerous Goods Shipping
- ☐ Site-Specific Training, Specify: \_\_\_\_\_
- ☐ Pre-entry training for emergency response skilled support personnel.
- ☐ Other: \_\_\_\_\_

## 7. MEDICAL SURVEILLANCE REQUIREMENTS

- X Baseline physical examination with physician certification.
- X Annual physical examination with physician certification.
- X Two-Year DOT physical examination with physician certification (DOT card).
- X Annual Fit Test
- ☐ Site-specific medical monitoring protocol, Specify: \_\_\_\_\_
- ☐ Asbestos worker protocol.
- ☐ Exempt from Medical Surveillance, Specify Reason: \_\_\_\_\_
- ☐ Examination required in the event of chemical trauma or exposure.

## 8. CHEMICAL HAZARDS TO PERSONNEL

*The following chemicals are known or suspected to be at this site:*

Chemical Contaminates of Concern		Hazardous Material brought on-site by Contractors		
Chemical Name	Concentration		Chemical Name	Quantity
Mercury	Unknown	<input checked="" type="checkbox"/>	HgX® Mercury Vapor Decontamination Powder	3 gallons
		<input type="checkbox"/>	Hg Cleaning Solution (Hg CS-102®)	1 quart
		<input type="checkbox"/>	Aluminum Powders	3 gallon
		<input type="checkbox"/>	SKC™ Surface Sampling Kit	1 quart
		<input type="checkbox"/>	Mercury Check Swabs	1 pack
		<input type="checkbox"/>	Hg Absorb™	1 quart
		<input type="checkbox"/>	Firststep® -Mercury Vapor Adsorbent	1 quart
		<input type="checkbox"/>	Merconspray™	8 ounce
		<input type="checkbox"/>	Merconvap™	1 quart
		<input type="checkbox"/>	Mercontainer™	1 quart
		<input type="checkbox"/>	Merconwipes™	1 pack
		<input type="checkbox"/>	Splifyter® -Mercury Indicator Powder	8 ounce
		<input type="checkbox"/>	Fuel (gasoline)	5 gallons

### Web Links

1. NIOSH Pocket Guide (Electronic Version) - <http://www.cdc.gov/niosh/npg/npgname-a.html>
2. Vermont SIRI MSDS Collection - <http://hazard.com/msds/>
3. J.T. Baker/Mallinkrodt MSDS Collection - <http://www.mallbaker.com>
4. NIOSH Chemical Safety Cards - <http://www.cdc.gov/niosh/ipcsneng/neng0000.html>
5. North American Emergency Response Guide (Material Search) - <http://hazmat.dot.gov/pubs/erg/psnsort.htm>
6. North American Emergency Response Guide (ID Number Search) - <http://hazmat.dot.gov/pubs/erg/unidum.htm>
7. North American Emergency Response Guide (Isolation Distances) - <http://hazmat.dot.gov/pubs/erg/greenpgs.htm>

*Additional Links*

1. U.S. Environmental Protection Agency - <http://epa.gov>
2. U.S. Environmental Protection Agency OSC Home Page - <http://www.epaosc.net>
3. OSHA - <http://www.osha.gov>
4. National Atmospheric Release Advisory Center (NARAC) - <http://narac.llnl.gov/>
5. **Region 5 ER Mercury Guide book**- [http://www.ert.org/products/mercury\\_response\\_guide\\_index.asp](http://www.ert.org/products/mercury_response_guide_index.asp)

Attach information obtained from any of the above references immediately after this page.

## 9. SITE SAFETY BRIEFINGS/MEETINGS

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- All personnel shall be provided with an initial and daily site safety briefing to communicate the nature, level and degree of hazards expected on site.
- All personnel will also receive briefings when significant changes in site conditions occur and the Health and Safety Plan will be revised accordingly.

## 10. EMERGENCY PROCEDURES

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- In all cases when an on-site emergency occurs, personnel shall not reenter the area or restart work until:
  - ✓ The condition resulting in the emergency has been investigated and has been corrected;
  - ✓ Hazards have been reassessed; and
  - ✓ Personnel have been briefed on any changes in either site operations or the site health and safety plan.
- Emergency Medical Procedures
  - ✓ Contact designated EMT; and
  - ✓ Do **not** attempt to move seriously injured personnel.
- Emergency Fire Procedures
  - ✓ Do **not** attempt to fight fires other than small fires in the early stages of development;
  - ✓ Do **not** take extraordinary measures to fight fires; and
  - ✓ Evacuate to a safe distance and call the fire department.
- Evacuation routes and assembly point(s) should be established locally, and all personnel should be informed of assembly point location during safety briefings.

## 11. COMMUNICATIONS

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- General signals during respirator usage:
  - THUMBS UP - I'm OK/I Agree
  - THUMBS DOWN - I Don't Agree
  - HANDS ACROSS THROAT - Out of Air/Trouble Breathing
  - GRAB HAND/ARM - Come with Me
  - HANDS ON HEAD - I Need Assistance
- Radio Communications
  - Working - Channel 1
  - Emergency - Channel 2
- Mobile Telephone(s) (*See page 1 and 7*)



### Web Links

1. Hospital Locator - <http://www.hospitaldirectory.com>
2. White Pages - <http://whitepages.com>
3. Yellow Pages - <http://yellowpages.com>
4. Yahoo Maps- <http://maps.yahoo.com>
5. Google Maps- <http://google.com/maps>

Emergency Contact	Location	Telephone Number	Notified
Hospital (Primary)	<b>U of M Health System</b> 1500 East Medical Center Drive, Ann Arbor, MI	(734) 936-4000	No
Hospital (Secondary)	St. Joseph Mercy Hospital - 5301 McAuley Drive Ypsilanti, MI 48197	(734) 712-3456	No
Ambulance	EMS	911	No
Police	Detroit Police	911	No
Fire Department	Detroit Fire Dept.	911	No

Does primary hospital have chemical trauma capability? Yes

If no, then where is the closest backup? Enter Back-up Hospital Name Here      Enter Telephone Number Here

### ADDITIONAL EMERGENCY TELEPHONE CONTACTS

Contact	Telephone/Pager Number	Contact	Telephone/Pager Number
R1 OSC Cell Phone	(734)-740-9013	R2 OSC Cell Phone	
START R1 Cell Phone	586-524-0613	START R2 Cell Phone	989-620-5465
START FSO Cell Phone	586-524-0613	START Project Manager	586-524-0613
START Program Manager- Pamela Bayles	(847) 918-4030 (O), (847) 826-8158 (C)	START Alternate Program Manager- Dan Capone	(517) 381-5920 (O), (313) 218-2659 (C)
START Manager- Rick Mehl	(312) 424-3312 (O), (847) 254-6981 (C)	START Manager- Frank Beodray	(440) 239-1978 x104 (O), (440) 336-6360 (C)
START SO- Tonya Balla	(847) 918-4094 (O), (847) 528-2623 (C)	Weston DSM- Ted Deecke	(847) 337-4147 (C)
Weston Med. Consultant- Workcare - Dr. Peter Greaney	call 800-455-6155	Work Care 24-hour Physician	Afterhours (800) 455-6155 push 3
CHEMTREC (Emergency)	(800) 424-9300	CHEMTREC (Non-Emergency)	(800) 262-8200

Contact	Telephone/Pager Number	Contact	Telephone/Pager Number
ATSDR- Dr. Mark Johnson	(312) 353-3436 (O), (312) 307-7415 (C)	EPA Regional Response Center	(312) 353-2318
National Response Center	(800) 424-8802	Utility Markout Services	1-800-Miss-Dig
National Poison Control	(800) 942-5969	Weston Warehouse- Ralph Milewski	(847) 265-5089 (O), (847) 417-7273 (C)

## 12. DECONTAMINATION PROCEDURES

- ☐ Wet Decontamination      Decontamination Method (s): [Click Here for Options](#)
- ☒ Dry Decontamination

The following decontamination stations should be set up in each decontamination zone:

- Segregated equipment drop
- Disposable glove, bootie, and coverall removal and segregation station
- Safety glasses and hard hat removal station
- Hand and face wash and rinse

If site conditions require upgrade to Level C, a station must be set up for respirator removal, respirator decontamination, and cartridge disposal.

☒ All investigative derived waste (IDW) generated will be placed in appropriate containers, labeled and stored on site for eventual disposal.

☐ Refer to Attachment A for additional Decontamination Procedures.

### Waste Management Practices:

Describe options for disposing of Hg clean-up kits, contaminated carpet and padding, personal protective equipment (PPE), etc.

- All PPE should be double bagged, set aside, and given to the clean-up contractor or disposal, whenever possible.
- Generally items contaminated by elemental (liquid) mercury should be disposed of as mercury-contaminated debris.
- A composite sample of the items for TCLP mercury may be required by the disposal facility.

### Disposal Facilities

- ☐ ☐ Bethlehem Apparatus Company, Hellertown, Pa.      Tel: 610-838-7034
- ☐ ☐ The Environment Quality Company, Belleville, MI      Tel: 800-592-5489
- ☐ ☐ Envirosource Technologies, Oregon, OH      Tel: 800-537-0426
- ☐ ☐ Drug and Laboratory Disposal, Inc., Plainwell, MI.      Tel: 800-685-9824
- ☐ ☐ Other \_\_\_\_\_ Tel: \_\_\_\_\_

Waste Types: ☒ Liquid ☒ Vapor

### Waste Characteristics:

- ☒ Volatile
- ☒ Toxic

☐ Other (specify) \_\_\_\_\_

**Hazards of Concern:**

- ☐ Heat stress  
☐ Cold Stress  
☒ Inorganic chemicals - Elementary Mercury  
☐ Other (specify) \_\_\_\_\_

**Explosion or Fire Potential:**

☐ High ☐ Medium ☒ Low ☐ Unknown

**13. PHYSICAL DESCRIPTION OF SITE**

*Enter the following information if known or complete when known:*

1. Size of site: \_\_\_\_\_ acres/ square feet
2. Distance to nearest residence: \_\_\_\_\_ feet/ miles
3. Nearest waterway: \_\_\_\_\_ Name \_\_\_\_\_ feet/miles
4. Nearest school: \_\_\_\_\_ Name \_\_\_\_\_ feet/miles
5. Nearest hospital: \_\_\_\_\_ Name \_\_\_\_\_ feet/miles
6. Nearest public building: Comerica Park \_\_\_\_\_ Name \_\_\_\_\_ 0 \_\_\_\_\_ feet/miles

*Other Important Information:*

Date of spill: August 7, 2007\_ Time of spill: \_\_\_\_\_

Type of neighborhood: ☒ Urban ☐ Suburban ☐ Rural

Extent of Spill: Yes No

- |                          |                          |   |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Is spill contained?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Did any people or animals track the mercury from the source of the spill? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is the floor tiled?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Is the floor carpeted?  |
| <input type="checkbox"/> | <input type="checkbox"/> | Was an attempt made to clean or vacuum the spilled mercury?               |
| <input type="checkbox"/> | <input type="checkbox"/> | Is the temperature greater than 70°F?                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Does heating system re-circulate inside air?                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Are sensitive populations involved?                                       |

**Web Links**

1. MSA Response Respirator Selector - <http://msanet.com/response/chemicalsearch.asp>
2. MSA Cartridge Life Expectancy Calculator - <http://webapps.msanet.com/cartlife/>
3. Scott Respirator Selection - <http://www.scotthealthsafety.com/airpur.htm>
4. Kappler Suit Smart PPE Selector - [http://www.kappler.com/techdata\\_main.html](http://www.kappler.com/techdata_main.html)
5. SKC air sampling (for the proper sampling methods and the mediums) - <http://www.SKCinc.com>
6. Wireless Information System for Emergency Responders (WISER) - <http://webwiser.nlm.nih.gov/getHomeData.do>

14. SITE AIR MONITORING PROGRAM

Action Levels				
These Action Levels, if not defined by regulation, are some percent (usually 50%) of the applicable PEL/TLV/REL. That number must also be adjusted to account for instrument response factors.				
	Tasks	Action Level		Action
<input type="checkbox"/> Explosive atmosphere		Ambient Air Concentration	Confined Space Concentration	
		<10% LEL	0 to 1% LEL	Work may continue. Consider toxicity potential.
		10 to 25% LEL	1 to 10% LEL	Work may continue. Increase monitoring frequency.
		>25% LEL	>10% LEL	Work must stop. Ventilate area before returning.
<input type="checkbox"/> Oxygen		Ambient Air Concentration	Confined Space Concentration	
		<19.5% O <sub>2</sub>	<19.5% O <sub>2</sub>	Leave area. Re-enter only with self-contained breathing apparatus.
		19.5% to 25% O <sub>2</sub>	19.5% to 23.5% O <sub>2</sub>	Work may continue. Investigate changes from 21%.
		>25% O <sub>2</sub>	>23.5% O <sub>2</sub>	Work must stop. Ventilate area before returning.
<input type="checkbox"/> Radiation		< 3 times background 3 times background to < 1 mR/hour   > 1 mrem/hour		Continue work. Radiation above background levels (normally 0.01-0.02 mR/hr) signifies possible radiation source(s) present. Continue investigation with caution. Perform thorough monitoring. Consult with a Health Physicist. Potential radiation hazard. Evacuate site. Continue investigation only upon the advice of Health Physicist.
<input type="checkbox"/> Organic gases and vapors	All			
<input checked="" type="checkbox"/> Mercury vapors	All	REL- 0.05 mg/m <sup>3</sup> (skin) PEL- 0.1 mg/m <sup>3</sup> ceiling TLV- 0.025 mg/m <sup>3</sup> IDLH - 10 mg/m <sup>3</sup> Symptoms and Effects of Acute Exposure- Irritation of eyes and skin, cough, chest pain, tremor, insomnia, bronchitis, pneumonitis, dyspnea, CNS effects		<12,500 ng/ m <sup>3</sup> (half the TLV) - Level D >12,500 ng/ m <sup>3</sup> to 50,000- Level C

Monitoring Equipment: (Specify instruments needed for each task; attach additional sheets as necessary)				
Instrument	Task	Instrument Reading	Action Guideline	Comments
Lumex RA-915+	<input checked="" type="checkbox"/> ALL	<12,500 ng/m <sup>3</sup>	Level D	The Lumex RA-915+ has a mercury vapor concentration range of: 2 to 50,000 ng/m <sup>3</sup> <input type="checkbox"/> Not needed
		12,500 ng/m <sup>3</sup> to 50,000 ng/m <sup>3</sup>	Level C	
Jerome 431	<input type="checkbox"/>	<0.0125 mg/m <sup>3</sup>	Level D	The Jerome MVA model 431 has a mercury vapor concentration range of 3,000 to 999,000 ng/m <sup>3</sup> <input type="checkbox"/> Not needed
		0.0125 mg/m <sup>3</sup> to 0.999 mg/m <sup>3</sup>	Level C	
		>0.999 mg/m <sup>3</sup>	Level B	
Jerome J405	<input type="checkbox"/>	<12.5 ug/m <sup>3</sup>	Level D	The Jerome MVA model J405 has a mercury vapor concentration range of 500 to 999,000 ng/m <sup>3</sup> <input type="checkbox"/> Not needed
		12.5 ug/m <sup>3</sup> to 999 ug/m <sup>3</sup>	Level C	
		>999 ug/m <sup>3</sup>	Level B	
Jerome 471	<input type="checkbox"/>	<12.5 ug/m <sup>3</sup>	Level D	The Jerome MVA model 471 has a mercury vapor concentration range of 30 to 250,000 ng/m <sup>3</sup> <input type="checkbox"/> Not needed
		12.5 ug/m <sup>3</sup> to 999 ug/m <sup>3</sup>	Level C	
		>999 ug/m <sup>3</sup>	Level B	
Drager tubes	<input type="checkbox"/>	<0.0125 mg/m <sup>3</sup>	Level D	The mercury vapor Drager tubes have a range of 0.05 to 2 mg/m <sup>3</sup> <input type="checkbox"/> Not needed
		0.0125 mg/m <sup>3</sup> to 0.999 mg/m <sup>3</sup>	Level C	
		>0.999 mg/m <sup>3</sup>	Level B	
Other: (specify)		Specify:	Specify:	<input type="checkbox"/> Not needed
When using the Lumex RA-915+, any readings about 50,000 ng/m <sup>3</sup> may be inaccurate.				
Realistically, the Jerome 431 MVA is accurate only when mercury vapor concentrations are greater than 0.01 mg/m <sup>3</sup> (10,000 ng/m <sup>3</sup> ).				

## 15. PERSONAL PROTECTIVE EQUIPMENT

### Task # 1

Assess the site for the presence of elemental mercury and mercury vapor.

Determine extent using a Lumex RA-915+ and/or Jerome Mercury Vapor Analyzer (MVA).

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
Level "C"	Saranex	Nitrile Surgical	Nitrile Surgical	Latex	Mersorb	

### Task # 2

Oversee and document clean-up activities.

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
Level "C"	Saranex	Nitrile Surgical	Nitrile Surgical	Latex	Mersorb	

### Task # 3

Confirmation air sampling-set up air sampling pumps for the collection of clearance samples, if requested.

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
Level "D"	None Required	None Required	Nitrile Surgical	None Required	None Required	

### Task # 4

[Click Here for Options](#)

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	

### Task # 5

[Click Here for Options](#)

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	

### Task # 6

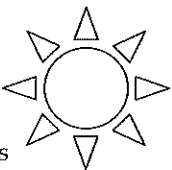




[Click Here for Options](#)

Level of Protection	Type of Suit/Coverall	Inner Glove	Outer Glove(s)	Boot Cover	Type of APR Cartridge	Cartridge Service Life (minutes)
<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	<a href="#">Click Here</a>	

## SITE CONTROL MEASURES

1. No person should enter the site without subscribing to this or another appropriate Health and Safety Plan.
2. The buddy or line of sight system is mandatory for all site personnel.

### Site Map with Work Zones

<b>Key</b>				
<u>Compass Rose</u> Use Black to indicate North Use Red to Indicate Prevailing Winds				
				
<b>Not to Scale</b>				

### 17. HAZARDOUS WASTE SITE AND ENVIRONMENTAL SAMPLING ACTIVITIES

Were Samples Obtained Off Site?    Yes    No                      On Site?    Yes    No

Type(s) of Samples: Air   SW   GW   Drum/Tank   Soil   Sediment   Asbestos   Wipe

Other: \_\_\_\_\_

How obtained: Poly Scoop   Drum Thief/Coliwaso   SS Trowel   Split Spoon   Auger   Bailer   Dredge

Bottle Immersion   Pump   Low-Flow Pump   Other: \_\_\_\_\_

Was Lab notified of Potential Hazard Level of Samples?    Yes    No



# 18. AIR MONITORING SUMMARY LOG

Date: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Collected by: \_\_\_\_\_

Please specify where air monitoring data will be documented: ☐ Field Notebook ☐ Field Data Sheets

☐ Air Monitoring Log ☐ Trip Report ☐ Other

Station Location	Multi-RAE	Micro FID	Radiation Meter	DataRAM or PDR	Lumex MVA	Other	Other
Background Readings	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		
	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		
	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		
	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		
	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		
	_____%LEL _____%O <sub>2</sub> ____ppm CO ____ppm H <sub>2</sub> S ____ppm VOC	____ppm	____μR/hr ____mR/hr ____CPM	____μg/m <sup>3</sup> or ____mg/m <sup>3</sup>	____ng/m <sup>3</sup>		

## 19. Air Monitoring Instruments Calibration Record

[illegible]

20. SITE HEALTH AND SAFETY PLAN ACKNOWLEDGEMENT

Name (Printed)	Signature	Affiliation	Date
Matthew Beer	<i>Matthew Beer</i>	Weston START	12/30/10

*Disclaimer: This Health and Safety Plan (HASP) was prepared for work under the Superfund Technical Assessment and Response Team (START) Contract EP-S5-06-04. Use of this HASP by WESTON and its subcontractors is intended to fulfill the OSHA requirements found in 29 CFR 1910.120. Items not specifically covered in this HASP are included by reference to 29 CFR 1910 and 1926.*

Comments/Follow Up
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**Attachment A**  
**DECONTAMINATION PLAN**  
(If applicable, include additional decontamination procedures,  
e.g. Section 5 from Weston Corporate HASP)



# MAPQUEST

## Trip to University of Michigan Health System

1500 E Medical Ctr Dr # 1D203, Ann Arbor, MI 48109 - (734) 936-9583

**4.64 miles - about 10 minutes**

Notes

**Bank securely in Chicago,**  
wherever, whenever,  
however you want.

Roll over to see how:

**Bank of America** [Learn More](#)

MEMBER FDIC



**2757 Canterbury Rd, Ann Arbor, MI 48104-5020**



1. Start out going **EAST** on **CANTERBURY RD** toward **SHREWSBURY AVE.**

go 0.2 mi



2. Turn **LEFT** onto **PLATT RD.**

go 0.0 mi



3. Stay **STRAIGHT** to go onto **S HURON PKWY.**

go 2.0 mi



4. Turn **LEFT** onto **FULLER RD.**

go 2.1 mi



5. Turn **LEFT** onto **E MEDICAL CENTER DR.**

go 0.3 mi



6. **1500 E MEDICAL CTR DR # 1D203.**

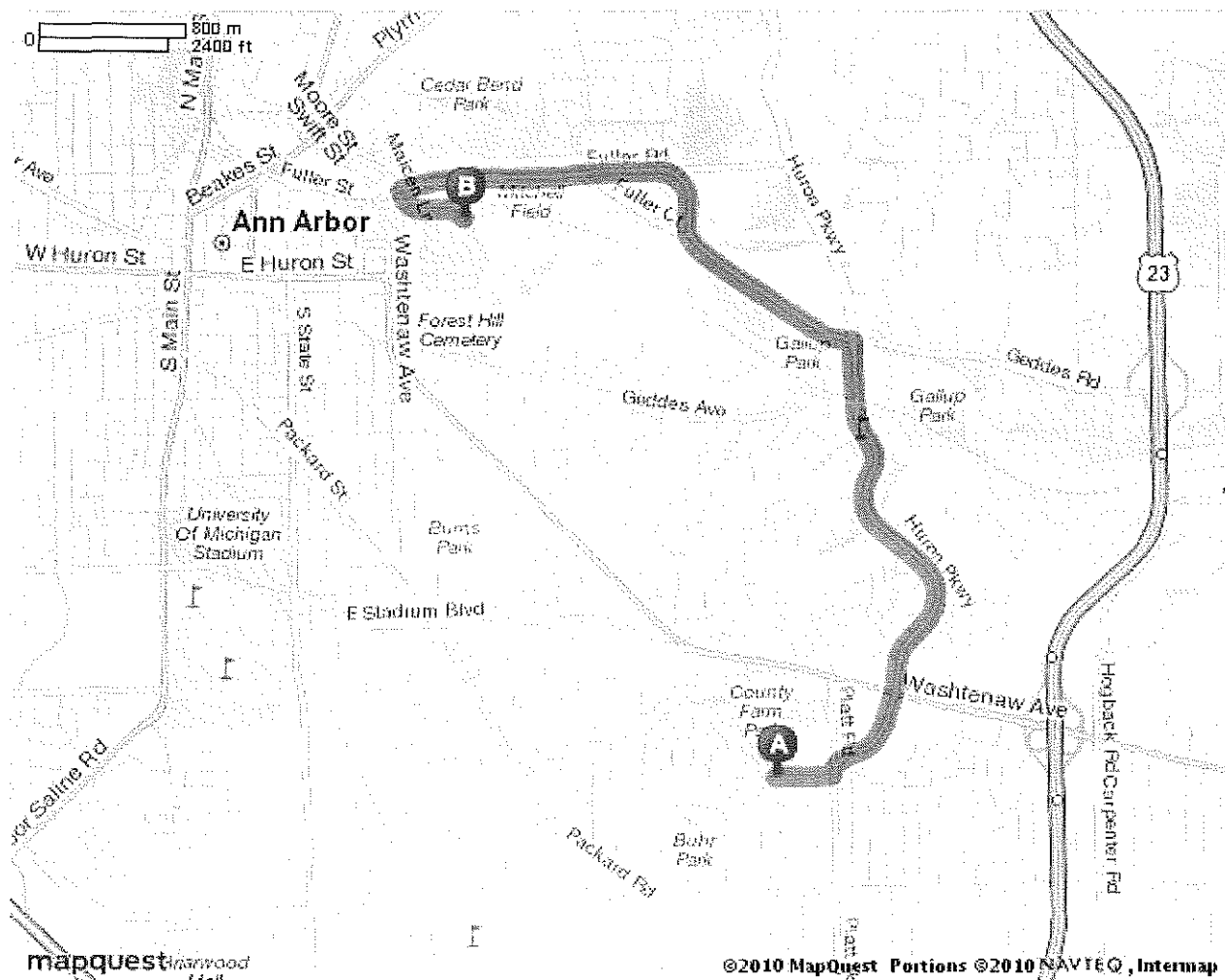
go 0.0 mi



**University of Michigan Health System - (734) 936-9583**  
**1500 E Medical Ctr Dr # 1D203, Ann Arbor, MI 48109**

**Total Travel Estimate : 4.64 miles - about 10 minutes**

**Route Map** [Hide](#)



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